RMT®
Integrated Environmental Solutions

Received 5/31/2000

222 South Riverside Plaza
Suite 820
Chicago, IL 60606
Telephone: 312-575-0200
Fax: 312-575-0300

May 15, 2000

Ms. Gwen Zervas
Case Manager
New Jersey Department of Environmental Protection (NJDEP)
Bureau of Federal Case Management
Division of Responsible Site Party Remediation
CN 028
Trenton, NJ 08625-0028

Subject: L.E. Carpenter & Company (LEC), Wharton, New Jersey
Lead Hot Spot(s) B and C

Dear Ms. Zervas:

RMT, Inc. (RMT) has prepared this letter on behalf of LEC to respond to the comments outlined in the NJDEP letter dated April 13, 2000 regarding the departments review of the Hot Spot B and Hot Spot C Subsurface Lead Investigation Report dated August 1999. Responses to the various issues raised in the April 13 letter are outlined below. In addition, this letter comprises LEC's justification for pursuing and implementing an alternate remedy that will be more appropriate than excavation and off-site disposal.

INTRODUCTION

L.E. Carpenter owned and operated the facility located at 170 North Main Street, Wharton, New Jersey, since its construction in 1943, through 1987. The facility was designed and operated for the manufacturing of vinyl wall coverings.

Hot Spots B and C are located in the central portion of the subject site, adjacent to former Building 14, east of the railroad right-of-way. Former Building 14 is actually the footprint of two historical LEC operations. The northern portion contained the Building 14 Coating Department, while the southern portion contained the Building 13 Compounding Department, and raw material bag and drum storage. Significant features included three loading docks, one on the northwest side, a second on the southwest side (near Hot Spot B), and one large loading dock on the south end. Pipelines from the former tank farm located to the east entered the building on its east side (near Hot Spot C). Additionally, a floor drain system was in place with floor drains from Building 14 discharging at the north end and floor drains from Building 13 discharging at the southeast corner (near Hot Spot C). Hot Spots B and C were historically investigated to determine the impact of loading and unloading practices at the former buildings.

346480

HOT SPOT B AND C INVESTIGATION AND REMEDIAL HISTORY

The following section provides a brief history of the various site activities and investigations that are pertinent to the issue of lead impacted soils.

1. Historical Mining Activities

As documented by Roy F. Weston, Inc. (WESTON) in 1995, the Dover Mining District was active since the early part of the 18th century between 1881 - 1910. Ores found in the vicinity of Wharton, New Jersey comprise the Wharton ore belt. Both the Washington Forge Mine and the Mount Pleasant Mine were formerly located on the LEC property. The ore mined in this area consisted predominantly of the iron-oxide mineral magnetite. Although magnetite was the principle ore mined in the district, the deposit is also enriched in iron-sulfide minerals such as pyrite, chalcopyrite, and pyrrhotite. Iron ore deposits and sulfide minerals are commonly associated with the mineral galena (lead sulfide). Presence of ore-bearing rock and sediments would be expected to occur in shallow soils at this site.

In the years between 1893 and 1916, ore shipped from the district was both hand-cobbed and magnetically separated. In 1903, a magnetic separator was installed in the Orchard Mine, directly across the Rockaway River from the Washington Forge and Mount Pleasant mines. Because magnetic separation was historically utilized, non-magnetic minerals such as galena could have been preferentially concentrated in the mine tailings likely present as fill material on the LEC property.

Early in the RI/FS process at this site it was assumed that lead levels elevated relative to generic soil cleanup objectives in Hot Spots B and C were related to past manufacturing operations, and specifically the LEC loading dock areas. This assumption was made despite the fact that lead was not used in, or a byproduct of LEC's manufacturing operations. Because the elevated lead found in soils is now known to be ubiquitous across the site (see discussions below), it is almost certain that elevated lead in soils is a result of historical mining operations, not operations conducted by LEC.

2. Historical Lead Hot Spot Investigations and Excavation

WESTON initiated subsurface investigations at Hot Spots B and C during remedial investigation (RI) activities conducted between 1990 and 1992. In accordance with the selected remedy outlined in the 1994 Record of Decision (ROD), WESTON performed a series

of excavations at both hot spots to remove and dispose off-site, all lead impacted soils in excess of the 600 mg/kg Non Residential Direct Contact Soil Cleanup Objective. Excavation of both hot spots B and C was initiated in November and December 1994 respectively, and performed in accordance with the procedures outlined in WESTON's Workplan for Phase I ROD Implementation (the Workplan) dated October 1994. However, results of post excavation sampling at both hot spots caused the excavation of each hot spot to be expanded three times. As a result the volumes of soil removed from both Hot Spot B and C exceeded the volumes estimates outlined in the Workplan by 145 and 40 cubic yards respectively.

Additionally, toxicity characteristic leaching procedure (TCLP) testing of soils elevated in lead from Hot Spots B, C, and the Waste Disposal Area was performed by WESTON in December 1994 and reported to the NJDEP in the letter dated January 11, 1995. In all cases, the sample analyses for RCRA criteria (i.e., toxicity via TCLP, ignitability, reactivity, and corrosivity), indicated that the soils were not characteristically hazardous, and did not pose a hazard to shallow groundwater quality via potential leaching of metals, including lead.

As outlined in the *Contaminant Delineation Plan – Hot Spots B and C*, presented as Attachment A in the Lead in Soils Data Compilation (WESTON, December 21, 1995), an additional round of soil sampling was performed at both hot spots in May 1996. A total of 37 samples were collected from 12 soil borings at each of the two hot spots. Analytical results revealed lead concentration ranges in soils with a spread of up to three orders of magnitude at varying depths. WESTON concluded that lead concentrations in excess of the 600 mg/kg remedial goal were scattered throughout the site fill material, and that neither a horizontal or vertical gradient existed. Additionally, 10 borings indicated that lead concentrations in samples collected at depth were higher than those concentrations detected in surface samples collected from the same boring.

In addition to performing the May 1996 lead soils investigation, groundwater samples were collected from temporary well points WP-A9 and WP-A7, both in proximity to Hot Spots B and C respectively. Both total and dissolved lead concentrations were below the NJ Groundwater Quality Criteria (GWQC) of 10 µg/L. This data was compiled with other data collected during the RI and subsequent quarterly sampling events, and presented in Appendix B of the Second Quarter Progress Report (WESTON, August 1996). Data show that on-site soils impacted with lead contamination above the site-specific cleanup objective are not adversely effecting shallow groundwater quality.

ADDITIONAL HOT SPOT B AND C SUBSURFACE LEAD INVESTIGATIONS

In 1999, RMT completed additional investigations related to lead content of soils in the Hot Spot B and C areas. The results of these investigations were included in our August 1999 Hot Spot B and Hot Spot C Subsurface Lead Investigation report. The follow subsections 1 and 2 provides responses to issues 2 and 4 in NJDEP's April 13 letter regarding their review of the August 1999 report:

1. RMT determined that TCLP testing of soils sampled within Hot Spots B and C was not considered appropriate because full horizontal and vertical delineation of lead impacts was not achieved during the April 1999 sampling event. The reason delineation was not completed is that as soil testing progressed, it became apparent that lead impacted soils were scattered about the whole site. The lead-impacted soils are not uniquely associated with any of the Hot Spots, areas of known contamination caused by historic LEC operations, former building foundations, and former loading dock areas. These observations supports the earlier work performed by WESTON (as described above) that also showed lead impacted soils were likely a function of historic fill materials from past mining operations. In short, all data collected to date shows that the lead-impacted soils are not associated with LEC or any of its historic manufacturing operations. In addition, as described above, TCLP testing of lead-impacted soils performed by WESTON indicated that the soils were not characteristically hazardous, and did not pose a hazard to shallow groundwater quality via potential leaching of metals. These characterization results are consistent with the May 1996 shallow groundwater analytical results discussed in the previous section, and shows that the lead constituent within on-site soils is not leachable even under strongly acidic conditions. RMT agrees with the NJDEP determination that TCLP testing would have to be performed in order to transport and dispose of these soils off-site.

2. The NJDEP noted an inconsistency between Section 2.1 and Table 1 of RMT's August 1999 report regarding the depths from which lead samples were analyzed. All samples were collected at the depths specific to each sample as detailed in Table 1. Samples were collected across the 1-2 and 5-6 foot intervals to ensure that 1) adequate sample volume was collected to perform the required analysis, and 2) sample results were not skewed due to the incorporation of larger-grained soil particles found during sampling activities.

HOT SPOT B AND C REMEDIAL ALTERNATIVE JUSTIFICATION

The following responds to issues 1 and 3 described in NJDEP's April 13 letter. Outlined below are the reasons why an alternate remedial strategy should be considered for Hot Spot B and Hot Spot C lead-impacted soils:

- As outlined in WESTON's Workplan for Phase I ROD Implementation (October 1994), Hot Spots B and C were identified due to their close proximity to loading dock activities on the western portion of former Building 14 (Hot Spot B), and pipelines from the former tank farm area (Hot Spot C). To date, the excavations at each hot spot have been expanded three times due to the discovery of lead-impacted sidewall soil samples at various locations. Subsequent investigations have not delineated either a vertical or horizontal clean zone for lead. Based on the results of historical investigations, specifically the random distribution of lead concentrations at varying depths, RMT believes that lead soil contamination is not the result of historical LEC operations, but rather a site-wide issue resulting from the presence of metals enriched mine tailings and native ore-bearing rock.

- Previous TCLP testing indicates that the lead found in on-site fill material is not leachable even under strongly acidic conditions, and therefore poses no threat to the water quality of the shallow aquifer system. This conclusion is supported by the May 1996 groundwater sampling results for total and dissolved lead.

- Proceeding directly with a dig and haul option would be cost prohibitive, especially considering that the likely risk associated with these soils, if any, is minimal. In addition, excavation would result in the disturbance of a significant portion of the subject site east of the railroad right-of-way, and would greatly impact current remedial and monitoring efforts.

- Leaving soils on-site in excess of the soil cleanup criteria is still consistent with the ROD if institutional and engineering controls are utilized.

ALTERNATE REMEDY INVESTIGATION AND FEASIBILITY ANALYSIS

Because of the widespread presence and random distribution of lead impacted soils in the eastern portion of the LEC site, we ask that NJDEP and EPA consider a remedial alternative other than

excavation and off-site disposal. Based on USEPA and NJDEP remedial alternative justification approval, RMT proposes to perform the following activities on behalf of LEC:

1. Continue with on-site vertical and horizontal delineation of lead impacted soils east of the railroad right-of-way by installing a series of test pits around the periphery of the known impacted areas. Samples from each test pit will be collected at varying depths based on historic vertical impact and analyzed for total and TCLP lead. Select soil samples would also be split and subjected to a mineralogical examination in order to determine the origin of elevated lead levels. A subsurface investigation report documenting the results of test pit installation and sampling will be submitted to the NJDEP for review. Additionally, this report will document the total surface area and corresponding volume of lead impacted soil existing east of the railroad right-of-way.

2. The total surface area and corresponding volume of lead impacted soil, as established by the above-outlined investigation, will be the subject of a focused feasibility study to further evaluate the viability of leaving this volume of lead impacted soil on-site. A revised risk assessment evaluating leaving lead-impacted soils on site will be performed as part of the focused feasibility study.

Based on the information described above, LEC requests that the USEPA and NJDEP approve this proposed investigation and focused feasibility study to evaluate a more appropriate remedy for on-site lead impacted soils.

Sincerely,

RMT, Inc.

Nicholas J. Clevett
Project Manager

cc: Cris Anderson - LEC
Jim Dexter - RMT
Galen Kenoyer - RMT
Central Files (2)